

THE GLASGOW SCHOOL OF ART

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**IN SEARCH OF MACKINTOSH'S GLASGOW SCHOOL OF ART'S
MACKINTOSH BUILDING EXISTENTIAL FRAMEWORK:
PLACE, TIME & BEING**

ONG SHEE LING

**IN SEARCH OF MACKINTOSH'S GLASGOW SCHOOL OF ART'S
MACKINTOSH BUILDING EXISTENTIAL FRAMEWORK:
PLACE, TIME & BEING**

Research Question:

What are the built revelations of Place, Time & Being in
Mackintosh's Glasgow School of Art Mackintosh Building?

Ong Shee Ling
Research Project
MSA Stage 4

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II INTRODUCTION

"... we have been experiencing ... an intense phase of time-space compression that has led to a disorientating and disruptive impact upon political-economic practice, the balance of class power, as well as upon cultural and social life..." --- David Harvey, "The condition of postmodernity", 1989, p.284¹

David Harvey, the Professor of Anthropology from England has called attention to the prevailing modern cultural construct of consumption and ocularcentrism. Adhering to trend, architecture adopted an advertorial image of form aestheticism over time, detaching itself from its primordial existential depth by virtue of economy. These phenomena bloomed as the rapid technological inventions encourage material and immaterial mobility and simultaneity of events. Human conscious hence measures into a reversal of time and space (temporalisation of space and spatialisation of time), a notion called "time-space-compression" denoted by David Harvey.² According to Jean-Paul Sartre, the reversal of the relative significance accorded to the notion of time and space has important repercussions on our understanding of physical and historical process.³

*"... What is being lost, aside from our psychic integration and temporal perspective, is a sense of bodily identification with the primeval world of our origins ... fundamental modes of reciprocal identification that yearn to be recognized and reflected back .. stripped of living time, we are ... no longer participating in a world sympathetic to our biological identity..."*⁴

The domination of virtual space in our living environment pushed human conscious to a state of frontal ontology, living as a mere spectator of images in a city without tactility. The loss of societal coherence, solidarity and empathy⁵ draws sense of disengagement and alienation in human conscious, disrupting one's self-orientation process in the world he inhabits. Nausea and social anxiety hence result from the failure of engagement. This ontological alienation however could be overcome by reaffirming an involvement with the grand realities of 'where' we are, 'when' we are and 'how' will be⁶, as suggested by Prof. Henry Plummer.

¹ Juhani Pallasmaa, *Encounters 2: Architectural Essays* (Rakennustieto Publishing, 2012), p.210

² Juhani Pallasmaa, *The Eyes of The Skin: Architecture and the Senses* (John Wiley & Sons Ltd), p.24

³ Juhani Pallasmaa, *The Eyes of The Skin: Architecture and the Senses* (John Wiley & Sons Ltd), p.23

⁴ Plummer, Henry, *Poetics of Light* (A+U Publishing, 1987), p.145

⁵ Juhani Pallasmaa, *Encounters 2: Architectural Essays* (Rakennustieto Publishing, 2012), p.99

⁶ Plummer, Henry, *Poetics of Light* (A+U Publishing, 1987), p.149

Architecture has long tied with the field of art, especially to Fine Art back dated in history. The Art of Architecture poses a role of reconciliatory and mediator between polarities of the past and future⁷, also the memory and imagination through immediate bodily perception. Juhani Pallasmaa wrote, "... If we desire to have an emancipating or healing role, instead of reinforcing erosion of existential meaning, we must reflect ... art of architecture tied to cultural and mental reality of its time..."⁸ Through the "natural time" experienced in the interchanging flow between two polarities, human conscious is able to constantly orientate itself in the world. It is the quests of architecture to create sense of place-ness, to define interiority and exteriority in the vast "natural space". It should inspire discoveries in solitude as well as a publication from private reflection of our inhabitation in culture, mental and temporal realities.

i EXISTENTIAL IN PHENOMENOLOGY

Existentialism first came into discussion when the German philosopher, Martin Heidegger's, "Being & Time" was published in 1927. In the writing, Heidegger imposes inquiry into the "being that we ourselves are", termed as "Dasein", meant for existence in German.

In Oxford Dictionary, as interpreted in Heidegger's writing, "existentialism" is defined as the philosophical theory which holds that a further set of categories, governed by the norm of *authenticity*, is necessary to grasp human existence.⁹ It was later to pursue further envisage on human existential, the notable philosopher, Heidegger embraced phenomenology methodology introduced by Edmund Husserl in the investigation.

"... Our body is both an object among objects and that which sees and touches them..."

--- Merleau-Ponty¹⁰

Phenomenology is understood as a study of "phenomena", a conscious interactional experience of human with surrounding things through deriving meanings with body as locus of experiences. Through forms of experiences such as perception, thought, memory, imagination and self-embodiment, consciousness realize its existence by relating itself to the surrounding things. The surrounding things are addressed with meanings, intentions and values for lived experiential space to take place in a definable interface. That is the "intentionality"-the directedness of experience toward things in the world, the property of consciousness that it is a consciousness of or about something.¹¹ It is then the sense of "being" emerges through the experience of process, activity and movement provoked from the "intentionality".

"... Living structures can only be if they become; they can exist only if they change. Change and growth are inherent qualities of the life process..."

--- Psychiatrists, Erich Fromm, To have or To Be, New York, 1976, pp. 12-13¹²

⁷ Juhani Pallasmaa, *Encounters 2: Architectural Essays* (Rakennustieto Publishing, 2012), p.23

⁸ Juhani Pallasmaa, *The Eyes of The Skin: Architecture and the Senses* (John Wiley & Sons Ltd), p.37

⁹ Crowell, Steven, *Existentialism*, created 11 October 2010, accessed 2 April 2013, <http://plato.stanford.edu/entries/existentialism/>

¹⁰ Juhani Pallasmaa, *The Eyes of The Skin: Architecture and the Senses* (John Wiley & Sons Ltd), p.23

¹¹ Crowell, Steven, *Existentialism*, created 11 October 2010, accessed 2 April 2013, <http://plato.stanford.edu/entries/existentialism/>

The Phenomenology disciplinary carried on into radical movements in several fields, including Architecture. In architecture, the study of phenomenology became crucial due to its environmental role. Architecture holds responsibility in the formation of the background situation where all phenomena come into intelligibility.

"... mode of invention is focused through a relative space, as distinct to universal space... architecture is an extension; a modification establishing absolute meaning relative to a place..."¹³

In contemporary architecture, three influential phenomenology practices are Juhani Pallasmaa, Steven Holl and Peter Zumthor. In their theory key texts, the idea of architectural phenomenology co-resonate, understood as an integrated experience of space, light, matter and time at a given situation of place and purpose. The cultural dimension is strongly emphasized to be inseparable from the architecture, which brings the bounded site as its physical and metaphysical foundation. The fusion of architectural experience as whole hence create a tension between conscious intentions and unconscious allusions¹⁴ bonded by situation, awakening lived existential through emotional participants.

"...in memorable experiences of architecture, space, matter and time fuse into one singular dimension, into the basic substance of being, that penetrates our consciousness. We identify ourselves with this space, this place, this moment, and these dimensions become ingredients of our very existence... -- integrity..."

¹² Plummer, Henry, *Poetics of Light* (A+U Publishing, 1987), p.139

¹³ Holl, Steven, *Anchoring* (Princeton Architectural Press, 1989), p.8.

¹⁴ Juhani Pallasmaa, *The Eyes of The Skin: Architecture and the Senses* (John Wiley & Sons Ltd), p.32

¹⁵ Juhani Pallasmaa, *The Eyes of The Skin: Architecture and the Senses* (John Wiley & Sons Ltd), p.76

ii PLACE, TIME & BEING

"... Architecture ... philosophical ventures that always begin with a location, linking to a person, a literary event or a motif. This then is varied through the ages or links one place with another in readings and concerts performed by actors, writers and ensembles of both local and international origin, accompanied by dance theatre, exhibitions and discussions..."¹⁵

The existentialism of architecture is held under three basic parameters, which covers sense of Place, sense of Time and sense of Being. It is derived from a totality of experience, rather than multiple fragmented perceptions. The parameters are strongly bonded to situational condition, such as the history, culture and the physical environment, where an organizing idea of "intentionality" can be formed.

PLACE

"The relationship of man to places and through places to spaces is based on his dwelling in them."
--- Martin Heidegger, "Building Dwelling Thinking"¹⁶

Heidegger emphasizes the way of living; also the cultural dimension generates the form of architecture of a place. Architecture gains its value when its character fits the logic of place. As Peter Zumthor commented, "... the reality lies in the word 'place' and 'purpose'...",¹⁷ the architecture serves to explain the meaning of the place, transfusing immediate understanding to its dweller. The bodily embodiment of dwellers in space arouses the awareness of location and the understanding of "how", "why" and "when" of things in place. The consciousness moves into state of composure allowing fusion of emotion between the dweller and the space, a sense of belonging hence achieved.

"...in the experience of art, a peculiar exchange takes place; I lend my emotions and associations to the space and the space lends me its atmosphere, which entices and emancipates my perceptions and thoughts..."¹⁸

It is understood that the sense of place in architecture of the past are established without conscious intention through use of local materials and craft through muscular and haptic senses, also by an association of landscape with cultural events and myths.¹⁹ With the time-space compression in the modernization, use of material and knowledge of construction internationalized. Architecture in the world resulted in image of repetition, losing its initial indigenous cultural characteristics. According to anthropologist, Mircea Eliade, humans in history tends to orientate themselves in a place through significant markers of things in their surroundings.

"... the discovery - that is , the revelation - of a sacred place possesses existential value for religious man; for nothing can begin, nothing can be done, without previous orientation-and any orientation implies acquiring a fixed point..."

--- Mircea Eliade²⁰

¹⁵ Zumthor, Peter, *Atmospheres* (Basel: Birkhauser Verlag AG, 2006), p.8

¹⁶ Zumthor, Peter, *Thinking Architecture*(Basel: Birkhauser, 2006), p.34

¹⁷ Zumthor, Peter, *Thinking Architecture*(Basel: Birkhauser, 2006), p.34

¹⁸ Juhani Pallasmaa, *The Eyes of The Skin: Architecture and the Senses* (John Wiley & Sons Ltd), p.13

¹⁹ Holl, Steven, *Anchoring* (Princeton Architectural Press, 1989, p.9

²⁰ Nute, Kevin, *Place, Time and Being in Japanese Architecture* (Routledge, Taylor & Francis Group, 2004), p.16

TIME

Likewise, humans develop technology in the process of protection from climatic extremities; we lost our biological identification to the world, desynchronized from the natural time.²¹ In the lived existential space, time manifests the law of change, also meant growth.

It is human's nature to seek perfection and permanence in beauty. The longing exemplified by modernization effect brought contemporary architecture into a flattened dimension with extensive use of durable man-made materials. The loss of temporal responsiveness in architectural works isolates human experience from the "lived time".

"The capacity to 'presence' into existence is dependent upon a twofold origination and decay, emerging and evanescent, rising and falling... a process of 'transiency' of 'becoming and perishing' which has roots in Greek thinking."

--- Martin Heidegger, "Early Greek Thinking", English trans. David Farrell Krell and Frank A. Capuzzi, San Francisco, 1984, p.31²²

Beauty lies in its transiency. The natural time needs to be experienced for human consciousness to constantly reorientate itself as well as to be aware of the depth and availability of time.²³ The natural time is a qualitative dimension instead of the known quantitative time of clocks. It exists in a range of temporal forms which Ernst Cassirer described as "consciousness of sequence".²⁴ Human conscious reorientate itself in reference to the change of environment atmosphere caused by the "natural time marker", such as dusk, twilight and seasonal change in a fixed continuous rhythm. The change of time became tangible through bodily perceptions. The significance traces, decays and wear in surrounding things came into light where human conscious co-relate with in the dimension of natural time. The phrase below is describing an experience of time in a Japanese traditional house behind its washi-made shoji screen:

*"...it ... cast beautiful shadows. This pattern would change during the day, depending on the sun, becoming long and short, dark and light. In Japanese this is called utsuroi - the ability to feel time changing..."*²⁵

²¹ Plummer, Henry, *Poetics of Light* (A+U Publishing, 1987), p.145

²² Plummer, Henry, *Poetics of Light* (A+U Publishing, 1987), p.139

²³ Juhani Pallasmaa, *Encounters 2: Architectural Essays* (Rakennustiето Publishing, 2012), p.42

²⁴ Plummer, Henry, *Poetics of Light* (A+U Publishing, 1987), p.141

²⁵ Nute, Kevin, *Place, Time and Being in Japanese Architecture* (Routledge, Taylor & Francis Group, 2004), p.124

Correspondingly, the awareness of time does not limit to the immediate experience of time, but to depth as well as mentioned. We live in a mental reality which perpetually flow back and forth between reality, dream and imagination with no fixed boundaries, temporal order or categories, suggested by Anton Ehrenzweig in his publication "Psychoanalysis of Artistic Vision and Hearing: An Introduction to a Theory of Unconscious Perception".²⁶ Our "lived experiential time" is measured through identification of experience in memory. Human conscious response to the temporal experience and memory while impose imagination of future through its body. The process of connecting time, conscious and body brings human to presence – a realization of existential.

"What then is time? If no one asks me, I know, if I want to explain it to a questioner, I do not know.... We measure times. But how can we measure what does not exist? The past is no longer, the future is not yet. And what of the present? The present has not duration.... In order that we may compare a short and a long syllable, both must have died away. Thus I do not measure the syllabus themselves, but the images of the two tones in my memory... Thus when I measure time, I measure impressions, modifications of consciousness.

--- Saint Augustin²⁷

BEING

As mentioned by psychiatrists, Erich Fromm, sense of being can only be derived upon experience of process, activity and movement.²⁸ Human conscious needs to be constantly reminded of its presence by defining itself in reference to surrounding things and to be aware of the nature of things.

*"To exist is to have a particular materiality in a specific part of space or a given moment in time. Particular materiality means not only having the physical qualities of a particular material, but also being a unique manifestation of these characteristics."*²⁹

Frank Lloyd Wright denotes the phenomenon as an apparent analogy between the pattern of things and human lives.³⁰ The relationship of human and pattern of nature develops meaning to the existence of all things and being. Architecture has the accountability to assist the formation of this relationship, to act as a receptacle to the pattern of nature.

*"...the idea of things that have nothing to do with me as an architect taking their place in a building, their rightful place-it's a thought that gives me an insight into the future of my buildings: a future that happens without me...a sense of home..."*³¹

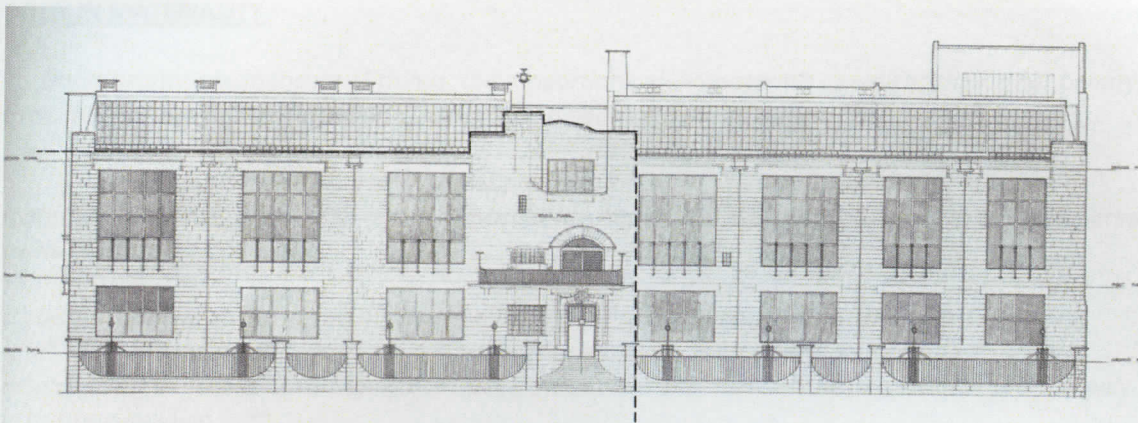
²⁸ Plummer, Henry, *Poetics of Light* (A+U Publishing, 1987), p.139

²⁹ Nute, Kevin, *Place, Time and Being in Japanese Architecture* (Routledge, Taylor & Francis Group, 2004), p.3

³⁰ Nute, Kevin, *Place, Time and Being in Japanese Architecture* (Routledge, Taylor & Francis Group, 2004), p.97

³¹ Zumthor, Peter, *Atmospheres* (Basel: Birkhauser Verlag AG, 2006), p.39

iii MACKINTOSH'S GLASGOW SCHOOL OF ART



Mackintosh's Glasgow School of Art (MGSofA) is located in the heart of Glasgow City Centre on Renfrew Street. Designed by architect Charles Rennie Mackintosh, it was built in 1897. Due to restriction on budget at 14,000GBP, the construction was broken down into two phases: from 1897 to December 1899 and from 1907-1909. The first phase constructs the central and eastern half sections of building which comprises the Museum, the Headmaster's Room and Board Room. The Second phase involves construction of West Wing and further amendments in the first phase construction to include new second floor of studios and additional workshops accommodated into a sub-basement floor.³²

MGSofA was initially built to serve as an educational institutional of art and design and still is after standing more than 100 years in Glasgow City Centre. The architecture poses the local identity in Glasgow, almost like a concretized time passage of the City. This research project lays an interest to the architecture's existential framework due to its central role of achievements in the artists, designers and architects education through the historical-duration. The identification of MGSofA's phenomenology framework will leads to better understanding in the metaphysical character of Glasgow while opening up possibilities to quality architecture of well-being.

³² The Glasgow School of Art, The Mackintosh Building, accessed 2 April 2013, <http://www.gsa.ac.uk/visit-gsa/mackintosh-building-tours/the-mackintosh-building/>

BODY IN MATERIALITY

*"... Outer beauty, the measure of things, the proportions, their materials as well as their inner beauty, the core of things It is perhaps apt to speak of the poetic quality of things."*³³

Architecture is a totality of material presence of things. To instill meaningful situation to materials generates poetical form and atmospheric condition in architecture, ready to be deciphered by its dwellers.

*"... sense that I try to instill into materials is beyond all rules of composition, and their tangibility, smell and acoustic qualities are merely elements of language that we are obliged to use. Sense emerges when I succeed in bringing out specific meanings that can only be perceived in just this way in this one building..."*³⁴

Architecture is perceived and synthesized as a whole while grasping on isolated details which refers to each another to achieve comprehension by the observer. The intentionality of architecture hence beholds the base of architecture creation, bringing in serious considerations on composition of elements as well as the art of joining. Based on Zumthor's writing in "Atmosphere", composition of elements involves the study of material radiance and compatibility. The radiance of material refers to the mutual reaction between things.³⁵ The character of material is boundless through different treatment, however releasing different degree and quality of radiance when placed in different situation. The situation here best described when imagining the same stone placed under the sunlight, in the water or in the desert – each manifests different meanings even though the subject is constant. Material changes its function and significance when in its different state. The intensity of radiance in things gets richer as things complements each other to pronounce its meaning in its unique atmosphere. The proximity between materials depends on the type of material and its weight, Zumthor wrote. Compatible materials are able to project its presence through allowing cross-referencing or flow of interchange with its surrounding. The mutual reaction realizes its tangibility as traces on matters to express its origin and history of human use.

*"... Detail, this poetics of revealing, interplays intimate scaled dissonance with large scale consonance. The vertical patience of a massive wall is interrupted by a solitary and miniature cage of clarity, at once giving scale and revealing material and matter ..."*³⁶

The art of joinery are details of connection where different material intersects. Its role is to establish balance of scale in architecture, formalizing rhythm among things within. It is also through details where elemental cultural knowledge such as idea of craft, procedure, technique and tools can be conveyed.³⁷

³³ Zumthor, Peter, *Atmospheres* (Basel: Birkhauser Verlag AG, 2006), p.8

³⁴ Zumthor, Peter, *Thinking Architecture*(Basel: Birkhauser, 2006), p.11

³⁵ Zumthor, Peter, *Atmospheres* (Basel: Birkhauser Verlag AG, 2006), p.25

³⁶ Holl, Steven, *Anchoring* (Princeton Architectural Press, 1989, p.10 & 11

³⁷ Brownell, Blaine, *Matter in the Floating World: Conversation with Leading Japanese Architects and Designers* (Princeton Architectural Press, 2011), p.13

"... Only when one analyses the substances of the wall, strips them of their plaster and examines their joints do these old buildings reveal their complex genesis ..."

--- Peter Zumthor, "Thinking Architecture", p.51³⁸

Juhani suggested that the dynamic compositional totality of architecture can only be appreciated by means of suppressing detail, ³⁹ giving authority to silence through uniformity of material, emptiness and matter-space-light dialectic. Steven Holl looks onto proto-elements, a trans-cultural uniformity which reads configuration of lines, planes and volumes in space. ⁴⁰The details express notations of belonging-separation, tension-lightness, friction, solidity and fragility. ⁴¹

LIGHT & SHADOW

"... natural light and shadows are subject to particularities due to the fact that the sun is not an exact point of source...rather than carving out various shapes on the ground according to the openings in the foliage, the sun's rays form similarly shaped elliptical spots of light. This effect is based on the sun's altitude angle... linear shadows are subject to "double shadow" which occurs when parallel branches of a winter-bare tree cast on top of each another..."⁴²

Light, where all life gains its force (energy) is the utmost medium in a living architecture. All place has its own Light. Of its particularity, the language of Light speaks of opacities, transparencies, translucency, patterns and shades.

Light lost its ontological significance in the process of functionality expression in modern architecture by placing too much attention on its quantitative connotation. Light hence become homogenous without its temporal reverberations. Heidegger pointed out that the capacity to 'presence' into existence is dependent on the process of 'transiency'.⁴³ Successive contrast between Light and shadow across space carries tension of time and the experience of continuous regenerations. Nevertheless, space charged with light and shadow permeates lineal gravity⁴⁴ which gestures to motion - a lived space for being.

In the phrase below, Eriko Horiki describes the temporal beauty of Light behind the shoji screen in traditional Japanese architecture,

"it... cast beautiful shadows. This pattern would change during the day, depending on the sun, becoming long and short, dark and light. In Japanese this is called 'utsuroi' - the ability to feel time changing..."⁴⁵

³⁸ Zumthor, Peter, *Thinking Architecture*(Basel: Birkhauser, 2006), p.51

³⁹ Juhani Pallasmaa, *Encounters 2: Architectural Essays* (Rakennustieto Publishing, 2012), p.231

⁴⁰ Holl, Steven, *Anchoring* (Princeton Architectural Press, 1989), p.11

⁴¹ Zumthor, Peter, *Thinking Architecture*(Basel: Birkhauser, 2006), p.16

⁴² Holl, Steven, Juhani Pallasmaa, and Alberto Pérez-Gómez, *Questions of Perception: Phenomenology of Architecture* (Tokyo: A+U Publishing, 2006), p.63

⁴³ Plummer, Henry, *Poetics of Light* (A+U Publishing, 1987), p.139

⁴⁴ Plummer, Henry, *Poetics of Light* (A+U Publishing, 1987), p.75

⁴⁵ Nute, Kevin, *Place, Time and Being in Japanese Architecture* (Routledge, Taylor & Francis Group, 2004), p.124

Of matter, mutual relationship exists between Light and things.

"In this case the new identities of image and various combinations of materials would become the new words in a language of objects. They would lose, however, the 'weight' of meaning that words such as 'marble', 'wood' and 'steel' once had. The recognizability of materials is destined to be a 'light recognition'..."

---Enzio Manzini, *The Material of Invention* (Cambridge: MIT Press, 1989)⁴⁶

Christian Norberg-Schulz once said, "When the Sun strikes a thing, light becomes aware of itself and the thing gains its presence."⁴⁷ Light is a form of energy. It does not merely render the surface it touches, but penetrates deep into matter and reacts from within. In things which locomotion is absent, corporal bodies acquire latent energy from Light to enliven itself to presence.⁴⁸

*"Light alone does not make light There must be darkness for light to become light- resplendent with dignity and power. Darkness, which kindles the brilliance of light and reveals light's power, is innately a part of light..."*⁴⁹

In architecture, Light is concretized by matter and presents. For darkness is in the mass, the juxtaposition and temporal interplay of Light and Darkness builds up an experiential depth. The in-between of Light and Darkness, two dimensions overlap forming whole new measure – the shadows. The shadow has no factual dimension or absolute boundaries. The state of vagueness dulls the vision and surfaces man's subconscious, engaging in memory, imagination and thoughts interchange at its utmost intensity.

COLOR

The experience of color in contemporary architecture is often perceived as pure ocular aesthetic. Colors in fact are strongly intact to human emotion through atmospheric effect.

*"... the intense Mexican sunlight in the streets of San Miguel de Allende and the omnipresent dust are countered by local use of bright yellows, oranges, reds and blues on the plastered facades of the houses. These saturated colors gain potency from the authentic material of pigment and surfaces of hand-applied textures. Intense Mexican sunlight yields a particular fading condition, transforming saturated reds and blues in natural relation to the humble masonry materials..."*⁵⁰

As described, color renders the mood of the space where mutual reaction between matter and light has taken place at a given metaphysical and cultural situation as well as time. Subsequent movement of Sun forms flowing luminous tonal patterns, heightening the sense of time and presence of things it relates to. The flowing atmosphere change carries the spirit of vagueness highly praised by Juhani Pallasmaa in his book "Encounters 2". The atmospheric indeterminacy consents flowing of thoughts and creativity through subconscious embodiment.

⁴⁶ Brownell, Blaine, *Matter in the Floating World: Conversation with Leading Japanese Architects and Designers* (Princeton Architectural Press, 2011), p.9

⁴⁷ Plummer, Henry, *Poetics of Light* (A+U Publishing, 1987), p.5

⁴⁸ Plummer, Henry, *Poetics of Light* (A+U Publishing, 1987), p.11

⁴⁹ Tadao Ando, 'Church of Light' in *Tadao Ando: Complete Works* (London: Phaidon, 1995), p.471

⁵⁰ Holl, Steven, Juhani Pallasmaa, and Alberto Pérez-Gómez, *Questions of Perception: Phenomenology of Architecture* (Tokyo: A+U Publishing, 2006), p.58

"... strong gestalt generates and maintains a strict perceptual boundary, whereas liberated 'gestalt-free' perception weakens the structuring impact of boundaries, thus permitting form and color interaction across boundary lines and between ground and figure..."⁵¹

Colors are not meant to be direct – it characterized through situation. Reacting to the body of materiality and light, colors obtain its energy to alter its opacity, transparency, reflectivity, refractivity and intensity.⁵² Leonardo da Vinci once termed the "Purkinje effect" – yellow, red and white are stands out in the light while the green and blue perpetually highlighted in the shadows.⁵³ It is a retinal response in human body towards his immediate environment.

"... Bright primary colors- blue yellow and red- seem muted on a matte surface with very low level of available light. In contrast, the subtle rainbow of colors ... against a white snow background may be incredibly intense - this phenomena that vary according to available light and contrast juxtapositions of transparency and opacity..."⁵⁴

TASTE

The experience of taste in architecture is almost totally neglected and placed at the lowest level in contemporary architecture experience. Together with tactility, gastronomy however represents the most archaic form of human perception.

Taste etymologically and semantically refers to the immediate generation of knowledge based on instinct, into knowledge on reasoning.⁵⁵ The basis of gastronomy in natural learning process is often observable in children which are frequently putting things into their mouth – a childhood edible discovery.

"... The rigorous design morality imposed by the form-function polarity of the Modern Movement has reduced architecture to its untouchable structural and functional bones...a completely different sensation is evoked when one rubs the naked hand across a marble column as opposed to rubbing it across a Miesian "I" Beam ..." ⁵⁶

The perception of taste in architecture does not necessarily a direct implication of an urge to lick or consume an element. It is a situation when an element evokes memory, familiarity and closeness through imaginative gastronomical and tactual imagination. For example, natural materials like sandstone made up from mineral contents tend to evoke certain salty or earthy scent and taste, subsequently transference of tactual experience of cold, damp and rough sandy surface. The perceptions are gained through reference to memory; awareness to surroundings is heightened through this process of embodiment. Experiencer are reminded of origin and nature of things, hence the sense of being.

⁵¹ Juhani Pallasmaa, *Encounters 2: Architectural Essays* (Rakennustieto Publishing, 2012), p.231

⁵² Holl, Steven, *Anchoring* (Princeton Architectural Press, 1989), p.11

⁵³ Plummer, Henry, *Poetics of Light* (A+U Publishing, 1987), p.85

⁵⁴ Holl, Steven, Juhani Pallasmaa, and Alberto Pérez-Gómez, *Questions of Perception: Phenomenology of Architecture* (Tokyo: A+U Publishing, 2006), p.58

⁵⁵ Frascari, Marco, "Semiotica Ab Edendo, Taste in Architecture", *JAЕ* 40/1 (1986), 2-7, p.4

⁵⁶ Frascari, Marco, "Semiotica Ab Edendo, Taste in Architecture", *JAЕ* 40/1 (1986), 2-7, p.3

SCENT

Scent is the most persistent memory among all perceptions but the least developed dimension in the realm of design. Scent is a phenomenon of volatility in matter when it changes its state.⁵⁷ It is often encountered at times of threshold – a temporal sense. Scent occurs to us when one is moving into a space or a moment, such as when you open up a door or flipping open the blanket on a bed. Hence, it could be said that the experience of scent could be a form of spatial boundary.⁵⁸

A research also reveals that the relationship of light and smell exists. A flower was found to emancipate different scent at different time of the day.⁵⁹ In fragrance industry, some fragrance extracted from the flower root was fermented through certain period of time before it is able to emancipate its maximum scent. Similar to architecture which old buildings tends to carries a particular scent with it, there is an evidence where chemical reaction within matter under the light could articulates the olfactory experience.

As vocabulary of scent has hardly been developed, description of scents often refers to colors, emotions, textile or immediate element.⁶⁰ In architecture, it is a question on how architects utilize the connection of these elements with the assistance of light and matter to give tangibility to the experience of scent.

SITE CIRCUMSTANCES & IDEA

"... In the courtyard of Nunnery in Uxmal, time is transparent, function unknown. The path of Sun is perfectly ordered with the architecture. The framed views align with the distant hills. Descending through the ball court, ascending the 'House of Turtles', and looking again towards the great courtyard... architecture and site are phenomenologically linked..."⁶¹

As mentioned in previous sub-chapter Sense of Place, physical, metaphysical and cultural dimension of site is inseparable from the creation of architecture. The anchoring of contemporary architecture is built upon a factual relationship among details identified on site. Act of anchoring does not solely put tradition to repetition but to undergo evolution with transcended knowledge to reflect contemporary situation and culture.

"...The resolution of the functional aspects of site and building, the vistas, sun angles, circulation and access, are the physics that demand the metaphysics of architecture (experiential link)..."⁶²

Architecture through physic and metaphysic links serves to establish absolute meaning relative to a place.⁶³ The coherence of physic, metaphysic and culture allows growth in architecture that eventually evolves into a material entity that obeys its own law.

⁵⁷ The New School, HEADSPACE 2010: On Scent As Design Part 1, YouTube video, posted 7 April 2010, <http://www.youtube.com/watch?v=0XJnOEPMUok>, i

⁵⁸ libd, i

⁵⁹ The New School, HEADSPACE 2010: On Scent As Design Part 2, YouTube video, posted 7 April 2010, <http://www.youtube.com/watch?v=nc4iV1Za4y8>, ii

⁶⁰ libd, ii

⁶¹ Holl, Steven, *Anchoring* (Princeton Architectural Press, 1989, p.9

⁶² Holl, Steven, *Anchoring* (Princeton Architectural Press, 1989, p.9

⁶³ Holl, Steven, *Anchoring* (Princeton Architectural Press, 1989, p.9

Architecture despite of merely forming boundary between exteriority and interiority, meaningful relationship between both dimensions are meant to be defined. The relationship between exteriority and interiority is examined in three directions: role of façade, the spatial composition and the transition.

*"... What do I want to see - me or someone else using the building later - when I am inside? And what do I want other people to see of me? And what sort of statement do I want to make publicly? ..."*⁶⁴

Firstly, the character of façade plays the role of identifying its function and intention to its immediate surroundings. Other from the nature of form and detail, the placement and nature of openings on façade interplays the image and relationship of activities between exterior and interior.

According to Zumthor, there are two basic spatial composition possibilities in architecture, which are the closed and the open bodies. The spatial composition here refers to how architecture sits on its site as an extension entity. The closed bodies sit a solid individual entity on site while the open body blends into its surrounding through act of dissolving. The open body breaks down its solidity as it extends its territory outwards, such as slab poles placed freely in row.⁶⁵

From understanding architecture through external observation, the environmental experience reaches another level of enlightenment in the act of transition between exterior and interior.⁶⁶ The change of enclosure, atmospheric condition and nature of transition heightens the awareness within subconscious. The entrance and exit as the fusion point between exterior and interior of architecture serves to introduce its unique meaning in its own specific form, such as threshold, crossing or even a tiny loop-hole door.⁶⁷

SURROUNDING OBJECTS

"... I'm impressed by the things that people keep around them, in their flats or where they work... things come together in a very caring, loving way, and that there's this deep relationship.."

--- Peter Zumthor, "Atmospheres", p.35⁶⁸

Architecture exists to be dwelled – like a stage setting where man lives his life doing different kinds of activities. Man should be able to take control over architecture for use and architecture should be a receptacle to objects man uses in his daily activities. The process of dwelling molds the interior atmosphere when man's objects are given its rightful place in the space, forming a sense of home in the architecture. The importance of objects in man's life is of their simplicity and familiarity.

⁶⁴ Zumthor, Peter, *Atmospheres* (Basel: Birkhauser Verlag AG, 2006), p.8

⁶⁵ Zumthor, Peter, *Thinking Architecture*(Basel: Birkhauser, 2006), p.21

⁶⁶ Zumthor, Peter, *Thinking Architecture*(Basel: Birkhauser, 2006), p.47

⁶⁷ Zumthor, Peter, *Atmospheres* (Basel: Birkhauser Verlag AG, 2006), p.8

⁶⁸ Zumthor, Peter, *Atmospheres* (Basel: Birkhauser Verlag AG, 2006), p.35

As Tadao Ando mentioned, "Architecture should not speak too much,"⁶⁹ architecture takes in possibility and flexibility of dwelling in a space. By creation of architectural space with rich depth, experience in the space could achieve tangibility. Man is given freedom to generate his own atmosphere and to give meaning to things around him.

"I like looking at things, I don't seek aesthetic pleasure in them...nor do I recall their origins... even so they all arouse memories, real and imagined...The things in the window.. They are images that do not reflect anything...I sing of the things in the window..."

--- Jarkko Laine, Finnish Poet, "Tikusta asiaa", Parnasso 6 (1982):323-4⁷⁰

PROPORTION & SCALE

Line, plane, volume and proportion construct the metaphysical framework of architecture,⁷¹ suggested Holl. Man experiences his surroundings by juxtaposing gravity of things with his body as locus.

"... with distance from me, distance between me and a building.. There's me on my own, of course and me as part of a group - completely different stories... or me in a crowd..."⁷²

Human body perceives the presence of things through their size, dimension, scale, mass, proximity and distance.⁷³ Since Renaissance architecture loses its plasticity and intimacy to the practice of idealism in zoning and planning introduced by the Functionalist.⁷⁴ Contemporary architecture is no longer scaled to human body nor molded to muscular and haptic habits as it is found in indigenous building. Human body is unable to orientate itself in the misfitting spatial depth. In Muji, Japanese retail of household and consumer goods. The products are designed to simplicity and emptiness. Things are designed to no fixed distinguishing form of matter. The emptiness of things put human mind into imagination to turn nothingness into use- there is no fixed way to use a thing but to use with instinct in respond to its proportion, scale, form and character. Similarly, it is the natural ability of human body to perceive and react to his surrounding material bodies in a space.

"... you don't just take a ground plan and draw lines and say these are the walls, twelve centimeters thick and that division means inside and outside. But where you have this feeling of the interior as a hidden mass you don't recognize..."

--- Peter Zumthor, "Atmospheres", p.51⁷⁵

⁶⁹ Nute, Kevin, *Place, Time and Being in Japanese Architecture* (Routledge, Taylor & Francis Group, 2004), p.85

⁷⁰ Juhani Pallasmaa, *Encounters 2: Architectural Essays* (Rakennustieto Publishing, 2012), p.26

⁷¹ Holl, Steven, *Anchoring* (Princeton Architectural Press, 1989), p.10

⁷² Zumthor, Peter, *Atmospheres* (Basel: Birkhauser Verlag AG, 2006), p.53 & 55

⁷³ Zumthor, Peter, *Atmospheres* (Basel: Birkhauser Verlag AG, 2006), p.55

⁷⁴ Juhani Pallasmaa, *The Eyes of The Skin: Architecture and the Senses* (John Wiley & Sons Ltd), p.32

⁷⁵ Zumthor, Peter, *Atmospheres* (Basel: Birkhauser Verlag AG, 2006), p.51

The presence of material body is perceived in the tactual memory on weight, resistance and gestalt,⁷⁶ suggested Hegel. The material presence is constantly exchanging energy with human body where even the thermal mass and sound can be detected in given proximity. The proximity and distance controls would define the level of interaction of energy between human body and its surrounding things. There is equilibrium of proportion and scale to be achieved in architecture not only as an enveloping body but also with the surrounding objects to bring out the presences of material bodies.

"...I consider surrounding space as well as the size of the particles and their relationship... balance could be achieved if the particles were a little larger, in equilibrium with the larger surface. so the details would be in balance with the larger surface..."

--- Kengo Kuma⁷⁷

MOTION IN BODY

"... We perceive atmosphere through our emotional sensibility - a form of perception that works incredibly quick.. Not every situation grants us time to make up our minds on whether or not we like something or whether indeed we might be heading off in the opposite direction ..."

--- Peter Zumthor, "Atmospheres", p.8⁷⁸

Architecture is both spatial and temporal not only to shelter but also to enable initiation of human activities under world situation through architectural interaction. Movement is a representation of flowing time through spaces – sense of life.

"... Japanese thinking is founded on a relational understanding of the concept of space. In recognition of the verb-essence of the architectural experience, Professor Fred Thompson uses the notions of "spacing" instead of "space", and of "timing" instead of "time", in his essay on the concept Ma, and the unity of space and time in Japanese thinking..."

--- Juhani Pallasmaa, "Eyes of Skin", p.68⁷⁹

Human eyes perceive surroundings as a series of overlapping perspectives instead of isolated retinal pictures. An active encounter in relationship among juxtaposing solids, voids, sky, street and objects suggest action in human subconscious to function and purpose. Architecture initiates, directs and organizes behavior and movement⁸⁰ of the experiencer while they move through the architecture unfolding continuous perspectives.

*"... In medieval illustrations and renaissance paintings, architectural settings are often depicted as mere edge of a wall or a window opening, but the isolated fragment suffices to conjure up the experience of a complete constructed setting ... art of collage ..."*⁸¹

⁷⁶ Juhani Pallasmaa, *The Eyes of The Skin: Architecture and the Senses* (John Wiley & Sons Ltd), p.55

⁷⁷ Brownell, Blaine, *Matter in the Floating World: Conversation with Leading Japanese Architects and Designers* (Princeton Architectural Press, 2011), p.77

⁷⁸ Zumthor, Peter, *Atmospheres* (Basel: Birkhauser Verlag AG, 2006), p.8

⁷⁹ Juhani Pallasmaa, *The Eyes of The Skin: Architecture and the Senses* (John Wiley & Sons Ltd), p.68

⁸⁰ Juhani Pallasmaa, *The Eyes of The Skin: Architecture and the Senses* (John Wiley & Sons Ltd), p.68

⁸¹ Juhani Pallasmaa, *Encounters 2: Architectural Essays* (Rakennustieto Publishing, 2012), p.26

Similar to collage and assemblage, the fragmented partial views derives its own total tactility, narrative and time.⁸² The open ended experience instills instinctual understanding of space in human subconscious provoking movement within architecture.

The temporality in architecture requires the fusion of natural phenomena. The change of interior atmosphere from the exterior phenomenal change intensifies awareness of time. Man needs to constantly involve himself in the adjustment to his surroundings through movement on interactive elements, such as doors, windows and shadings.

SOUND

"... anyone who has become entranced by the sound of dripping water in the darkness of a ruin can attest to the extraordinary capacity of the ear to carve a volume into the void of darkness, The space traced by the ear in the darkness becomes a cavity sculpted directly in the interior of mind ..."
--- Juhani Pallasmaa, *"Eyes of Skin"*, p.54⁸³

According to Pallasmaa, the auditory vocation of architecture is tranquility.⁸⁴ In tranquility the sound of material bodies describes its structure of space to its dweller. The mass of architecture acts as an instrument, sound is shaped to character by the forms, scales, materials and surface textures as it travels through the spaces.

"... How does it really sound when we walk through it, when we speak, when we talk to each other... ---> interaction between people and object to give out radiance ?..."
--- Peter Zumthor, *"Atmospheres"*, p.29⁸⁵

"... Imagine extracting all foreign sound from a building, and if we try to imagine what that would be like with nothing left, nothing there to touch anything else. The question arises: does the building still have a sound? ...each one emits a kind of tone. They have sounds that aren't caused by friction..."
--- Peter Zumthor, *"Atmospheres"*, p.31⁸⁶

Sound exists even in stillness- material body in solitude has its own sound. Where organic matter inspires metabolic growth, non-organic matter inspires motion from absorption of radiation,⁸⁷ suggested Plummer. The sound may either triggered by movement of air across its body or even the sound of matter motion. There is a constant interaction between all things and its surroundings, giving presence to each another at all times. When there is human activity, every space responds man's existence in the space through the voice of architecture. The silence concentrates human conscious to pure fundamental question of existence.

⁸² Juhani Pallasmaa, *Encounters 2: Architectural Essays* (Rakennustieto Publishing, 2012), p.54 & 55

⁸³ Juhani Pallasmaa, *The Eyes of The Skin: Architecture and the Senses* (John Wiley & Sons Ltd), p.54

⁸⁴ Juhani Pallasmaa, *The Eyes of The Skin: Architecture and the Senses* (John Wiley & Sons Ltd), p.55

⁸⁵ Zumthor, Peter, *Atmospheres* (Basel: Birkhauser Verlag AG, 2006), p.29

⁸⁶ Zumthor, Peter, *Atmospheres* (Basel: Birkhauser Verlag AG, 2006), p.31

⁸⁷ Plummer, Henry, *Poetics of Light* (A+U Publishing, 1987), p.13

WATER

"I introduce nature- light, wind, and water- within a geometric and ordered architecture, thereby awakening it to life. Climatic changes in turn transform the condition of architecture from moment to moment... in these results, architectural expression is born that is capable of moving the human spirit and allow us to glimpse the eternal within the moment."

--- Tadao Ando⁸⁸

The image of nature is sense of life and existence itself. Man co-exists with nature through lived time. Tadao Ando accentuates this relationship by introducing and framing nature's phenomena in his architecture. The direct cropping of natural scene confronts man to derive an interpretation of their own.

Water, is exceptionally celebrated in the field of phenomenology. It is praised for its definitive presentation of Life. Water is the vital source of life – supporting life not only in its body, it is essential to the growth of life on earth from crops to human. The origin of human history also often illustrates strong relationship to rivers and oceans. Where there is life, there is death. Flowing of water depicts flowing of time.

"To disappear into deep water or to disappear toward a far horizon, to become part of depth of infinity, such is the destiny of man that finds its image in the destiny of water."

---Gaston Bachelard, "Water and Dreams: An Essay on the Imagination of Matter"

Bachelard describes human life as the state of running water – it is a transitory element, constantly flowing with growing depth (of mind) and eventually stops flowing as it reaches the vast ocean. The life ends.⁸⁹ Nonetheless, the sound of water accentuates both silence and sound – of death and life.

Of depth, the reflective surface of water hides its depth, as the present conceals the past and future,⁹⁰ wrote Pallasmaa. The tension of surface is not defined - by opacities, transparencies and translucencies, the two opposite dimensions are still observable in vague, also both dimensions are exchanging energy across the fine boundary. Similar to time, present time is the fine line between past and future, where memory flows back and forth.

⁸⁸ Nute, Kevin, *Place, Time and Being in Japanese Architecture* (Routledge, Taylor & Francis Group, 2004), p.85

⁸⁹ Matthawthorn, Gaston Bachelard Presentation, created 10 November 2007, accessed 2 April 2013, <http://www.slideshare.net/matthawthorn/bachelard-presentation>, p.9

⁹⁰ Juhani Pallasmaa, *Encounters 2: Architectural Essays* (Rakennustieto Publishing, 2012), p.43

v METHODOLOGY

In this research project, the existential framework is identified to be influenced by three major criteria: Sense of Place, Sense of Time and Sense of Being. The primary built revelations which for each criterion will be identified through the reference of phenomenology study.

The final result of this research project will be recorded in a table as below:

	Sense of Place	Sense of Time	Sense of Being
Built Revelation	(built revelation)	(built revelation)	(built revelation)
	(representational image)	(representational image)	(representational image)

As the case study, Mackintosh Building is under protected as a heritage building, photography is not allowed. This limitation will be encountered by the use of images produced from external references. However, analysis will be made based on first person direct experience under tour guidance through the building.

Before moving into the analysis, the research question for this research paper is:

What are the built revelations of Place, Time & Being in Mackintosh's Glasgow School of Art Mackintosh Building?

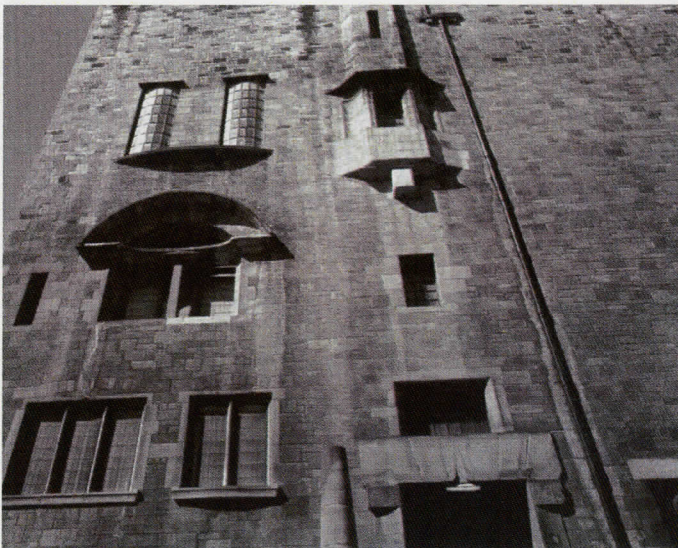
The purpose of this research project is to identify the existential framework in Mackintosh's Building which allow high degree of personal creative development as part of a successful artistic education.

III ANALYSIS

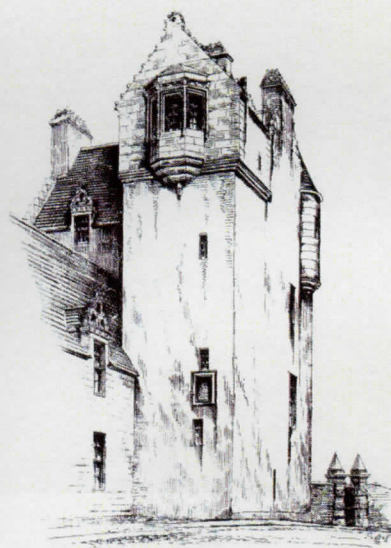
i PLACE

"... Charles Rennie Mackintosh ... talk 'Scottish Baronial Architecture', to the Glasgow Architectural Association in 1891, ... use phrases as 'dear to my heart' and 'deep and filial affection'... how some will go along 'muddy roads and snowy path...'"⁹¹

In the process of designing Mackintosh School of Art, the architect, Charles Rennie Mackintosh recalls the image of Scottish Old Castles and Fortresses. He made reference of the historical architecture as inspiration of retaining the archaic experiential identity of Scottish architecture. The South elevation of Mackintosh Building projects similar image to Fyvie Castle in Aberdeenshire through its arrangement of openings, scale and proportion. On the other hand, the corbel windows on the East façade represent the elemental identity in Scottish architecture, having overlapping image with Maybole Castle in Ayrshire.



1.01 East Façade, Mackintosh Building
From Mackintosh Masterwork of Art: The Glasgow School of Art, p.94



1.02 MacGibbon & Ross:
South West façade, Maybole Castle
From Castellated and Domestic Architecture of Scotland, vol.3, 1889, p.500

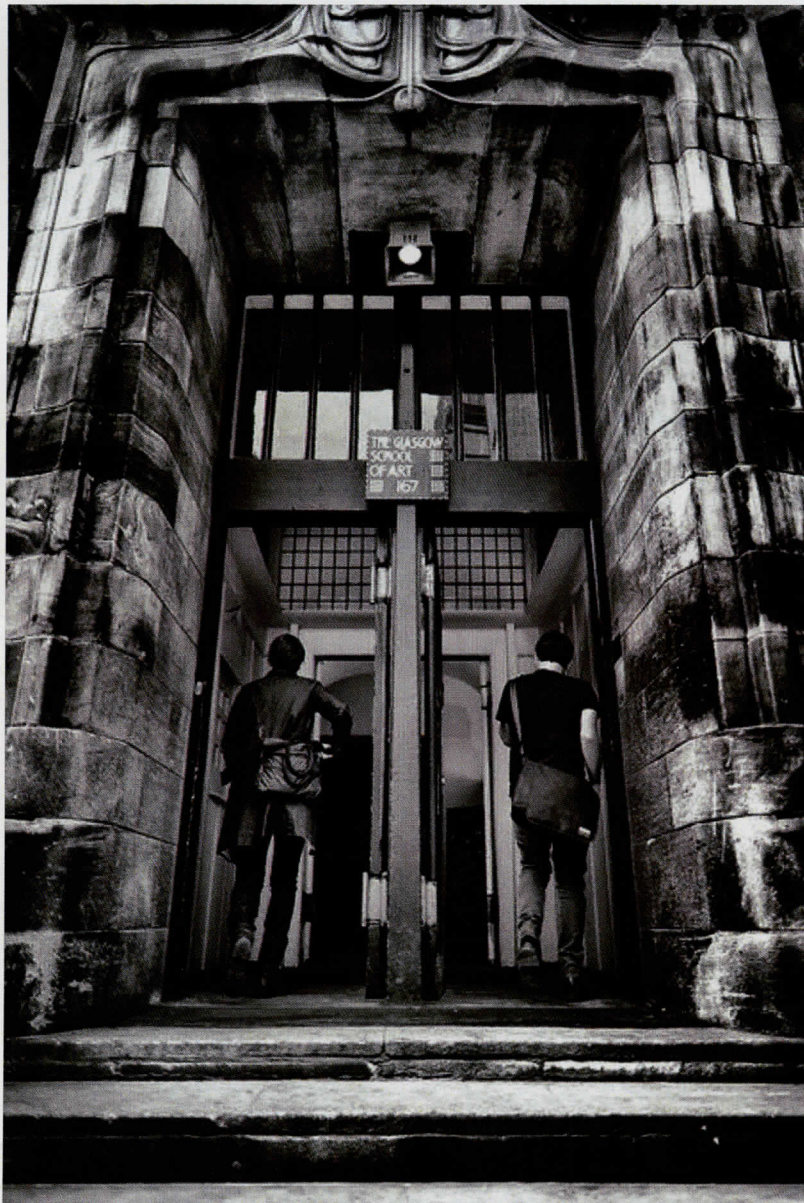
⁹¹ Buchanan, William, *Mackintosh Masterwork: The Glasgow School of Art* (Bloomsbury Publishing, 2004), p.18

Mackintosh Building is constructed with thick solid walls of sandstone, brick and concrete. The primary material, sandstones are locally quarried - Giffnock sandstone and Whitepot sandstone in mixture of ashlar and squared, rubble. Under the light, the honey color sandstone energizes. Light reflects on the rough surface and became diffused. Of the multiple overlaying of light shades, soft and warm orange luminous tonal pattern renders the façade face – the Glasgow Light. Color of yellow of the sandstone is particularly sensitive under bright daylight. Sandstone has been given its meaning in the situation where the city Glasgow of overcast sky, the Light could be celebrated to its supremacy. The light creates an extension of visual depth to the facades, giving presence to the building as the city enlivened.



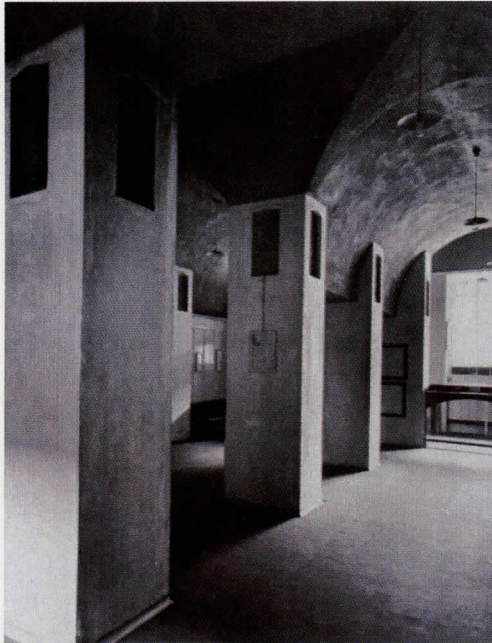
1.03 Golden Orangey luminous tonal pattern on Sandstone façade under the Light
From Mackintosh School of Art, Flickr,
<http://www.flickr.com/photos/glasgowschoolart/2945990995/>

At the entrance, a wide staircase awaits leading visitors upwards. Moving from exterior to interior, after the flight of staircase, a slender timber post stood in the middle, in front of the double leaf swing doors. The post orientates the transitional movement in the experiential decision making – one side as entrance and the other as exit. Each side is only wide enough for one person to cross over. The entrance acts as a threshold from airy and light exterior into a solid and heavy interior. The sudden sense of narrowness through deep carved-in at the entrance introduces an action image of moving into a cave.



1.04 The transition from exterior to interior through narrow entrance guided by timber post
From Jason Brown, Flickr, <http://www.flickr.com/photos/abbozzo/5821182617/>

At the entrance hall, rows of thick solid square piers greet the visitors as thick walls envelope the interior space. Sets of delicate designed wood furniture sit around comfortably within the heavy interior. The contrast of scale and mass intensifies the gravitational force in the space. Of solidity and fragility, the mass of both objects reacts, giving radiance to each another to express its presence. It is as if all things are in its rightful place and achieved equilibrium. The experienter is then able to comfortably orientate his body within the harmonious atmosphere – sense of “home”. Through the mutual reaction, in the high projection of interiority, perceptive dimension is sharpened, allowing exchange of emotions between the experienter and things.



1.05 Weightness in entrance hall with square piers
From Mackintosh Masterwork of Art:
The Glasgow School of Art, p.102



1.06 The juxtaposition of mass between heavy structure and delicate furniture
From Mackintosh Masterwork of Art:
The Glasgow School of Art, p.117

In this sturdiness, the role of sound came into utilization to articulate awareness of space in the building. The thick wall removes all external noises, putting its interior in total serenity. In the stillness, when people moves around on the wooden floors, over the wooden stairs, sound of footsteps thuds across the hallway; when people converse to each another, the voice and laughter reverb across the hallway - the echoes are deep, hollow and short, also carrying a little dampness from the surrounding matters. The sound announces the presence of things around, advising the experienter of his location and whereabouts in the building.

*“... anyone who has become entranced by the sound of dripping water in the darkness of a ruin can attest to the extraordinary capacity of the ear to carve a volume into the void of darkness, The space traced by the ear in the darkness becomes a cavity sculpted directly in the interior of mind...”*⁹²

⁹² Juhani Pallasmaa, *The Eyes of The Skin: Architecture and the Senses* (John Wiley & Sons Ltd), p.54

In Mackintosh Building, at the entrance hall, footsteps from the museum on the upper floor suggest an invitation to the experiencer by ascending the central staircase. The building articulates motion within its Body through embedded information or guidance within the acoustic experience.



1.07 Movement upwards on central stairs made of timber
From Kit Wong, Flickr, <http://www.flickr.com/photos/kitwong/160887734/>

The understanding of spatial structure apparently also found dependent on the transcended practice of culture. The symmetrical spatial planning within the building is a common practice in the West since Renaissance. The symmetry of interior was as well introduced to the experiencer on the exterior façade. Sound on the matter hence serves as an extension of spatial explanatory medium on the qualitative experience of depth in the building.

Moving into details, end of walls at the East staircase is molded into steps. The intention of form has never been affirmed – however the molding provokes imagination in its observer to visualize what it may represent. As suggested by Steven Holl, an architecture that anchors to its site is a creation through modification which establishes an absolute meaning relative to a place. The steps may represent the Ziggurat Belus at Babylon or even just a simple encounter with the existing steps, however the form also evokes an image of corbelling practice in the indigenous Scottish Architecture. In the process of identifying its meaning, an awareness of placeness is formed in the subconscious by comparing images of different places.



1.08 Steps molding at East staircase

From Mackintosh Masterwork of Art: The Glasgow School of Art, p.113

Nonetheless, the structure of Mackintosh Building narrates its place through similar methodology. The structure of Mackintosh Building is inspired by the Japanese architecture. The construction is of timber post and beams, sometimes with double beams. It involves clean and simple structural lines. The inspiration source traces back to the formation of direct trading relationship between Glasgow and Japan at that time through shipbuilding industry. The exposure to external influence has taken Japanese culture to immense appreciation in Glasgow. The Japanese architectural language may not be indigenous; however it has successfully provokes question of place in human subconscious. The Japanese essence in Mackintosh Building became a relative reference of placeness in Glasgow. However, without end up instilling a foreign language on the site, the Japanese construction was carefully merged with the local culture. In the museum, the arched roof trusses under the skylight proposed an image of ship framework, acknowledging the transcended knowledge of timber construction and the history of Land.

As explained above, it is observable that the creation of Mackintosh Building has been based on multiple sources of relevant reference. From image of old castle, corbel window, sandstone, entrance, symmetry, structure to details, every element creates a collective experiential collage of place. Through the open-ended experience, the extraction of subliminal information enables the sense of place which awareness connoting the questions of 'where', 'why' and 'when' could be achieved.



1.09 The fusion of Japanese influenced construction in local interpretation
From Mackintosh Masterwork of Art: The Glasgow School of Art, p.109

ii TIME

In Glasgow, the sky is overcast at most time. The temperature is cool and it tends to rain. The restraint of sunlight on the site has brought to the common practice of sky lighting in Scottish Architecture. In Mackintosh Building, moving through spaces is like moving through temporal reverberation of light and temperament. The sequential spaces are manipulated through its size and dimension to achieve the experience. The spaces interplay the combination of brightness and darkness with airiness and stillness. The successive contrast of spatial characters is then able to instill each space with a personal architectural event – an experience of temporal regeneration. For example, in the east where the wide corridor locates, the space is bright and airy. Natural light floods in the space through top lighting and energizes in the white painted space. As the experienter moves subsequently to the staircase area at the end of corridor, he encounters a space of darkness and stillness. The staircase area is built with polished concrete. Not only darkness of the concrete color, the heavy structure puts the space into stillness. The narrowness of the space brings proximity between the building and the skin of experienter closer to each another. The proximity activates thermal interchange between two, which the experienter senses the coldness from his surrounding matter. However, the spatial experience were bound to change again as the experienter ascends to another level. Going through the door, a sudden blow of wind came from the other side of the space. The space is yet dark and narrow, but became an airy space. The sudden wind creates an invisible spatial threshold, denoting the “timing” of entering a new space – a temporal experience.

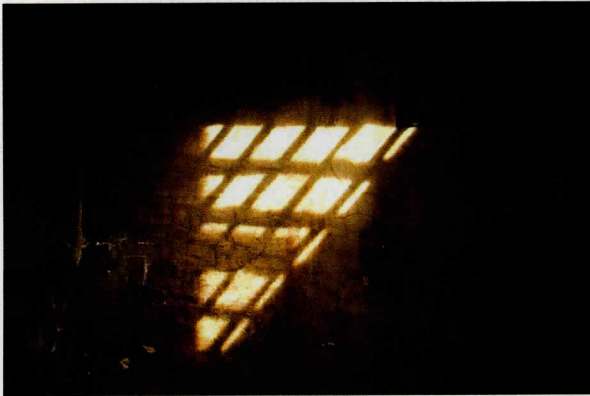
“... ability to create, through detailing, singular building ' events' ,are to define particular spaces through simple arrangements of building elements (a truss, a doorway, or a window embrasure), or to orchestrate unforgettable sequences of low and high, dark and light, closed and open spaces...”⁹³



1.10 Flooding of bright light from toplighting in East Corridor
From Mackintosh Masterwork of Art: The Glasgow School of Art, p.103

⁹³ Buchanan, William, *Mackintosh Masterwork: The Glasgow School of Art* (Bloomsbury Publishing, 2004), p.77

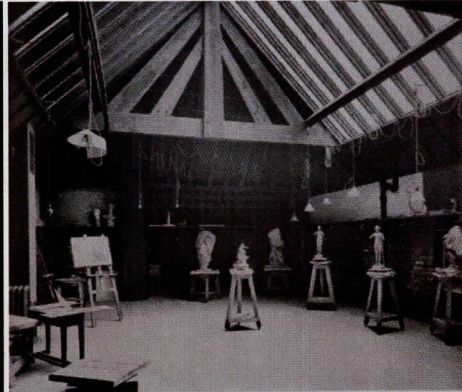
Of skylight and vertical glazing, the illumination in Mackintosh Building is soft and constant, but not dull. The openings where Light intrudes are proportionally scaled down to human scale through framings. Window openings are framed with thick iron frames while roof lightings are remodeled by its supporting timber frames. The frames cast pattern of living shadows on things in the interior. When the Sun moves, the shadow moves along while constantly changing its intensity, angle and pattern. Every moment in the space the scene is different – it is a lived space of Light and shadow.



1.11 Glazing broken down to scale with Iron framing to cast living shadows

From Nick Van der Linde, Flickr,

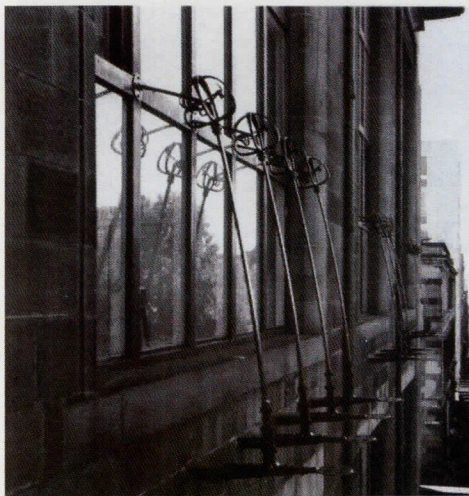
<http://www.flickr.com/photos/nickvanderlinde/1499682643/>



1.12 Skylight molded with supporting roof trusses in Life Modelling Studio

From Mackintosh Masterwork of Art: The Glasgow School of Art, p.129

Outside the studio, sculpted iron brackets of growing seeds narrates the time to both interior and exterior of the building. At different situation of the lighting environment, from day to night, the refined sculptures' temporal responsiveness cast interesting shadows on either side of the attached façade. There are also occasions where the image of the iron brackets was reflected on the window glazing.



1.13 Reflection of iron bracket on studio window glazing

From Mackintosh Masterwork of Art: The Glasgow School of Art, p.89

On the other hand, with the knowledge of arts and craft, Charles Rennie Mackintosh molded Mackintosh Building with form with tactility and hapticity. Instead of a plain flat façade, it was molded with tridimensional character with leveling and ornamentations. Time fuses with the building through the light that casts moving shadows in reaction to the form of building. The character of shadows in Mackintosh Building indirectly expresses the flow of natural time that needs to be grasped by human conscious. Human eyes are very sensitive to Light, a slight change in light would gestures the participation of human subconscious in his surroundings, hence beckons the acknowledgement to moving time.

Also, in praise of shadows, flow between memory and imagination in human conscious activates. Where there is no Light have no shadows and vice versa. In the First Floor East Corridor, lights are directed into space through deep ogee-shaped skylight. Despite of its thought-provoking nature, the shape of skylight assists in diffusing incoming lighting. The diffusing nature of lighting illustrates the state of vagueness suggested by Juhani Pallasmaa. The experiencer in this space grasps the depth of time through exchange of thoughts.



1.14 Mutual reaction between light and between form on West Facade

From Jason Brown, Flickr,

<http://www.flickr.com/photos/abbozzo/4525723964/>

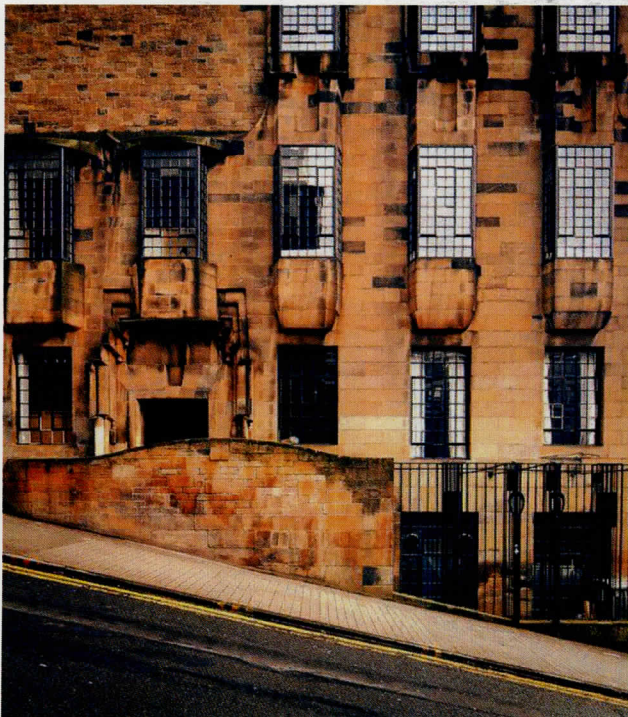


1.15 Diffused lighting from ogee-shaped skylight on first floor East Corridor

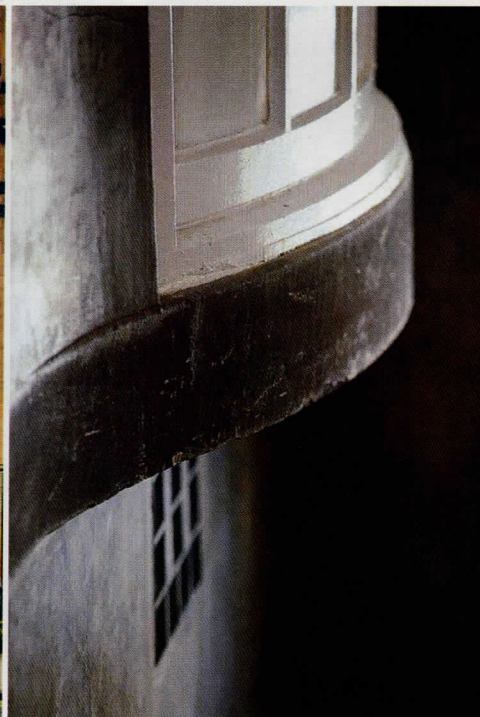
From Mackintosh Masterwork of Art: The Glasgow School of Art, p.112

At that time, Glasgow had a glorious tittle in the industry of shipbuilding and heavy engineering. The architect for Mackintosh Building nevertheless courageously engaged and developed the contemporary knowledge in his design. Locally designed central heating, electric lighting, processed timber and plate glass were utilized in the building, without compromising its sophistication of arts and crafts. In a sense, Mackintosh Building is a concretized time passage which links the haptic realm of old Architecture and the technological realm of contemporary knowledge, celebrating the significant turning point of history in Glasgow.

Other than the direct fusion of time through machineries, traces of time has also been materialized due to the revolution. During the industrial period, the air in Glasgow was slightly polluted from the active shipbuilding and heavy factory works. The pollutants in air have caused the slight change of the sandstone's original color on the Mackintosh Building façade. The pollutants in air left certain black traces unevenly on its overall surface. Of nature, the moisture in Glasgow concretized time in another form depicting growth. At certain parts of the facades, mosses grew from the connection between stones. Nonetheless, the natural materials used in the building plays an important role. As time passes, stones cracked and timber paint peals. Every trace of wear and tear and growth happen simultaneously on the façade, through time the building has acquired its own character and its own narration of history and human use.



1.16 Trace of dark matters on façade from pollutants in the past
From Hassan Bagheri, Flickr,
http://www.flickr.com/photos/h_ssan/6177486798/

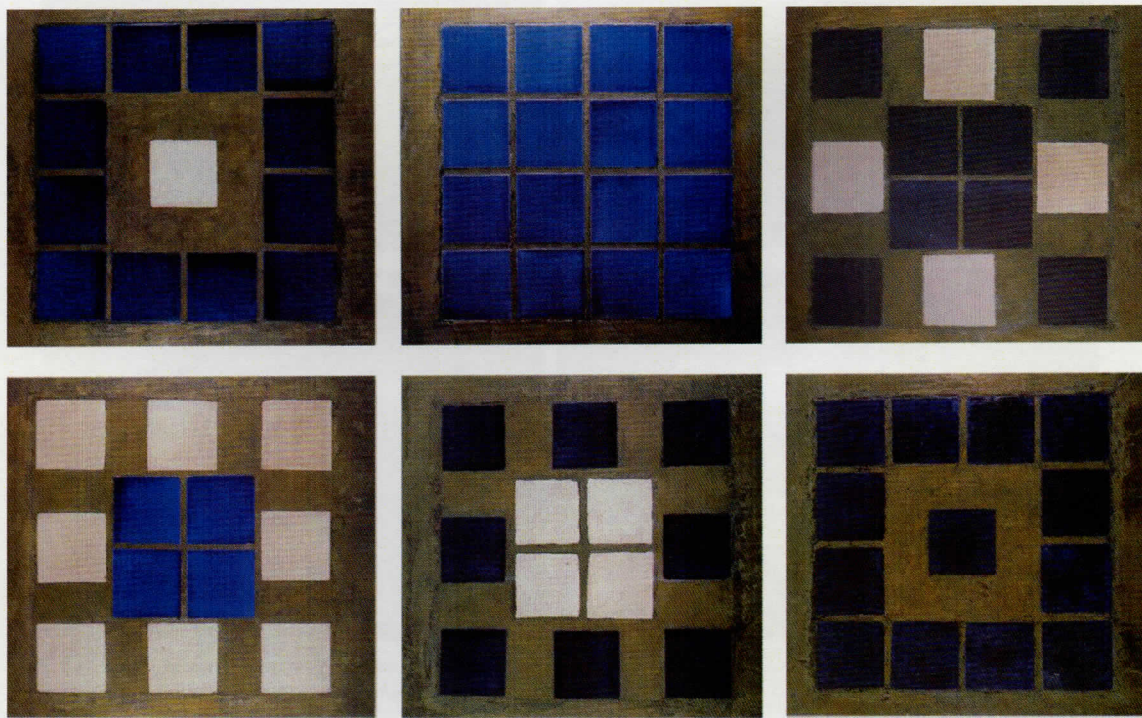


1.17 Trace of wear and tear from human use
From Holley Hayes, Flickr,
http://www.flickr.com/photos/sacred_destinations/8048482315/

iii BEING

Buchanan described Charles Rennie Mackintosh's fundamental belief that art, architecture and crafts were one creative whole⁹⁴. For the architect, his knowledge on arts and crafts revolves around the practice of symbolization in ornamentations. He is essentially inspired by the power of Geometry and the Nature itself in his work of Art.

According to Jungian Psychology, circle symbolizes the psyche while the square symbolizes the body and reality- the basic factor of Life⁹⁵. Geometrical symbolizing motifs are found in several places in Mackintosh Building, especially square motif which was extensively used. It has been used in the school sign, furniture and at the staircase areas. The square motifs at staircase area are particularly mind provoking. It is a square composed of 4 x 4 smaller square ceramic tiles of white, blue and green. The tiles were embedded at the end of concrete wall at each level of staircase. The composition of smaller squares evolves in permutation at different levels. These motifs vary although in similar language. It indirectly refers to each another, provoking human conscious into synthesis of meaning as a whole entity.



1.18 Square motifs set at Staircase Core
From Mackintosh Masterwork of Art: The Glasgow School of Art, p.27

⁹⁴ Buchanan, William, *Mackintosh Masterwork: The Glasgow School of Art* (Bloomsbury Publishing, 2004), p.18

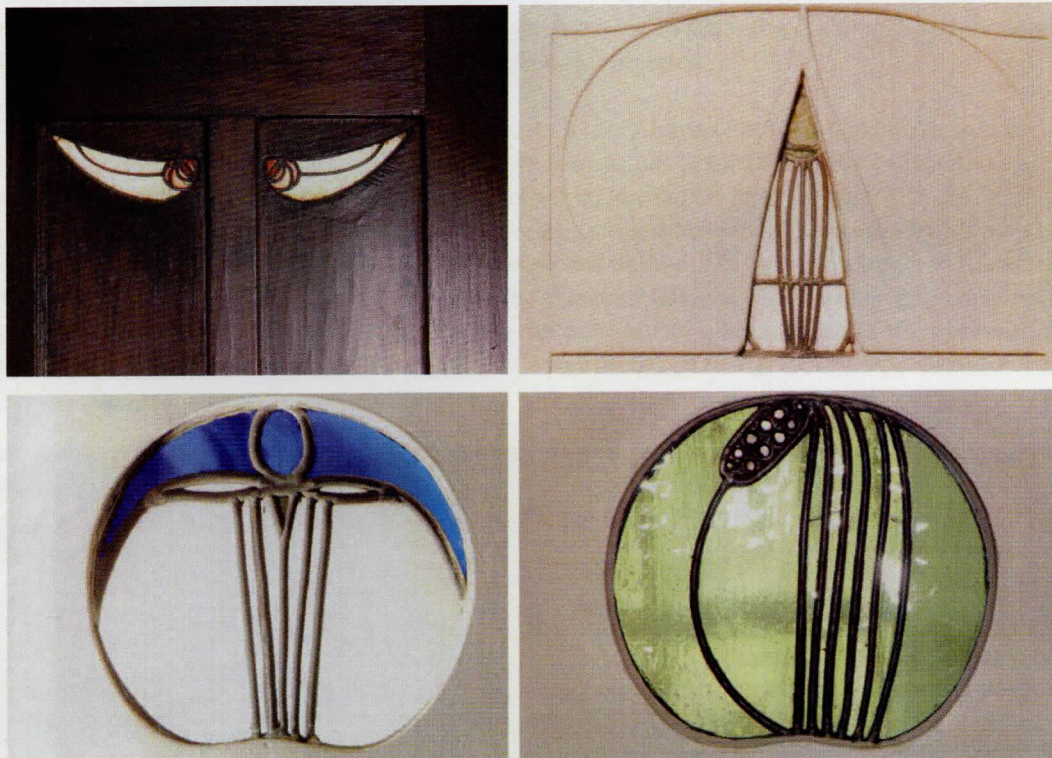
⁹⁵ Buchanan, William, *Mackintosh Masterwork: The Glasgow School of Art* (Bloomsbury Publishing, 2004), p.21

The motif of rose buds on the other hand poses the primary nature-inspired ornamentation in Mackintosh Building.

"Art is the Flower. Life is the green leaf. Let every artist strive to make his flower beautiful living thing. You must offer real, living beautifully colored flowers that grow above the green leaf. You must offer the flowers of the art that is in you, the symbols of all that is noble and beautiful and inspiring. How beautiful the green leaf. How beautiful life often is, but think of the stupendous possibilities of the flower thus offered - of art."

--- Charles R. Mackintosh, 'Seemliness', in Pamela Robertson (ed.), *Charles Rennie Mackintosh: The architectural papers, White Cockade, 1990, p.22*⁹⁶

The art of Mackintosh principally engage in the Questions of the World and of Being, as described by the architect himself. It is constantly reminding the observer of his root on Earth under the Sky, in the city of structures and machines.



1.19 Exemplar nature-inspired motifs on stained glass
From Mackintosh Masterwork of Art: *The Glasgow School of Art*, p.30 & 31

⁹⁶ Buchanan, William, *Mackintosh Masterwork: The Glasgow School of Art* (Bloomsbury Publishing, 2004), p.22

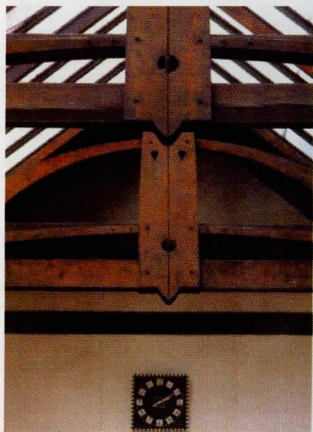
However, Charles Rennie Mackintosh does not only deal with patterns and symbols in design. The art of architectural craft making has been taken in with serious considerations. The art of craft involves the embodiment of human body, of muscular and haptic identification. In the timber structural construction of Mackintosh Building, the details of joining are exposed and occasionally highlighted under the Light. Human eyes observe and grasp an understanding of its crafting idea, technical process and the use of tools. It is then human conscious looks for further details, synthesizing its background treatment – polish, grains or even carvings. As mentioned, the presence of things is defined through each another. The elaborate scaled timber trusses in the museum have patterns carved. The contrast of massive structure and delicate details juxtapose and define each another, creating a balance sense of scale and proportion. As described,

“... Each piece should be beautiful in itself, and, still more important, should minister to and increase beauty of the other, Collective beauty is to be aimed at...”

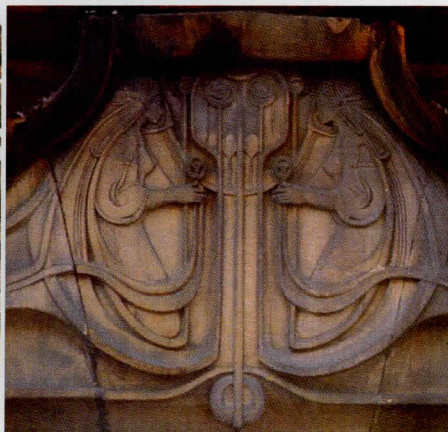
--- Halsey Ricardo, “Mackintosh interior designer”, p.20⁹⁷

Structures and things in Mackintosh Building are sophisticatedly designed to refer to each another. They are meant to project a collective atmosphere as a whole within the building. The two polarities of hence enable human conscious to define self through his body.

It is nonetheless the principle of arts and crafts for Charles Rennie Mackintosh to take account of every surrounding thing in the creation. The details in furniture play crucial role in Mackintosh Building as the scale of it is most tangible to human bodies. The guardian stone relief at the main entrance was personally molded by Charles Rennie Mackintosh himself with his own bare hands. The effort has shown the degree of attention has been put in by the architect in the work of craftsmanship. The brass sign plates in the building, the embossments were imperfect, however they acknowledges the work of human hands. Familiarity of hapticity is in the hand of the observer, an image of activity in human conscious heightens his awareness of being.



1.20 (Left) Detailed carving on roof trusses in Museum
From Mackintosh Masterwork of Art: The Glasgow School of Art, p.78



1.21 (Right) Hand-crafted Stone relief at Entrance
From Mackintosh Masterwork of Art: The Glasgow School of Art, p.32

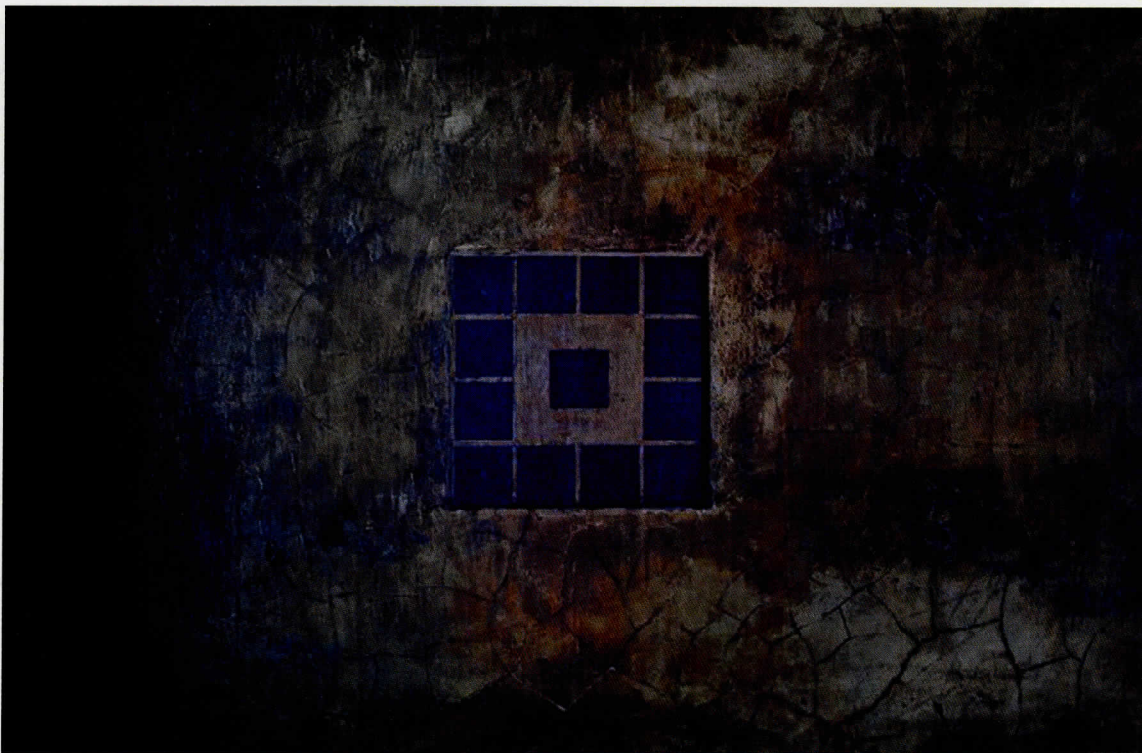


1.22 Brass plate sign with imperfect embossment
From Mackintosh Masterwork of Art: The Glasgow School of Art, p.26

⁹⁶ Buchanan, William, *Mackintosh Masterwork: The Glasgow School of Art* (Bloomsbury Publishing, 2004), p.57

At all places, dark timber furniture and wall claddings were installed. They were polished and the color is so dark as if the grain almost cannot be seen. However, the dark timber was able to act as a canvas. Built as an art school, used by art students, the dark timber would sometimes splashed with paint colors or stained by mediums like plaster and glues. The dark surface highlights traces of human activity in the building, giving means to the space itself.

Of materials, crafts and ornamentations, Mackintosh has essentially evokes sense of being through the image of process and activity. It has been suggested that sense of Being could only be when there is an acknowledgement to process, activity or movement – the core idea of growth and change. Mackintosh on the other way has induced the sense of being through movement by the use of Light and interactive elements throughout the building. The temporal reverberation of spaces in Mackintosh Building as described in previous chapter illustrates the capacity to initiates movement across the building through its lineal gravity. Even in the dark spaces as the staircase area, the square motifs at the end of walls gestures motion to human conscious. In the shadow, the blue and green tiles appear to liven up through the Purkinje effect, reckoning its observer to move closer. Despite of human body movement, the movement of shadows also heightens one's awareness of Life and Being.



1.23 Purkinje Effect of Blue ceramic tiles in shadows


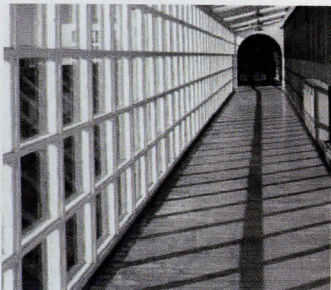
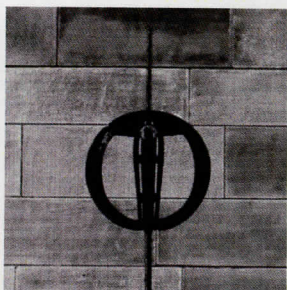
From Jason Brown, Flickr, <http://www.flickr.com/photos/abbozzo/4706878307/>

Nevertheless, the interactive elements in Mackintosh Building are the furniture. Furniture was designed to be placed at its rightful place. Every image of furniture in its place suggested an image of action or activity to its observer. As the experiencer moves around the building, swinging doors suggests an action of pushing through; as the experiencer walks up the wide central stairs, series of timber posts suggest an action of use as supporting balustrade. The constant interaction of human body with his surrounding, undeniably projects the idea of living as a Being in moving Time.



1.24 Timber post reflect action image to experiencer
From Mackintosh Masterwork of Art: The Glasgow School of Art, p.81

IV CONCLUSION

	Sense of Place	Sense of Time	Sense of Being
	Solid Thick Walls	Framing	Ornamentation
Built Revelation			

Through analysis in this research paper, built revelations are concluded in respond to three main senses which are crucial for the creativity development in architectural practice of Mackintosh Building.

In the discussion of Sense of Place, it was understood that the built revelation carries cultural dimension of the local community. It should provide meaning to the place and be able to tackle questions of 'how', 'why' and 'when' within the experience of the architecture. In Mackintosh Building, its solid thick wall holds up the whole framework of placeness. The solid walls depict the historical essence of Scottish architecture of castles and fortresses. It is through the manipulation of opening voids and the properties of matter which forms the total experience of atmosphere. The scale, proportion and placement of opening voids narrates the sense of place from the exterior. On the other hand, the matter of the walls, sandstone shaped the acoustic quality of the interior space. Each element assists to define each another to create an experience of place as a whole.

On the Sense of Time, it is a matter of grasping the natural time through built revelation which allows temporal response in human conscious. Human conscious needs to be aware of the depth of time and its availability, and to be able to constantly reorientate oneself in the dimension of time. In Mackintosh Building, it is believed that nature of framing plays important role in its temporal experience. The framing does not only literally means the framing of windows, but also framing of space with planes of walls. Spaces in Mackintosh Building are sequentially framed or boxed up into a successive contrast of experience. The tangibility of time in the building lies in the moving shadows and the total experience of each "framed" space.

Lastly Sense of Being looks into the experience of process, activity and movements. It heightens man's awareness on nature of things, as well as how man is related to this particular pattern of nature. Charles Rennie Mackintosh has used the art of ornamentation to achieve sense of Being in Mackintosh Building. The ornamentations appear in forms of stone relief, stained glass motifs as well as structural and furniture crafting. Through motifs, the architect intends to provoke synthesis of meanings on Life and Nature; on the other hand through crafting, the architect intends to explain the experience of process, activity and movement interactively in both vision and hapticity.

Nevertheless, it should be understood that all three senses could achieve its effect only when all elements are experienced in a whole. The breakdown of built down revelation could only be used as a guidance of identifying the main activator of all other reacting elements to create the overall architectural atmosphere. The atmosphere denoted here refers an experience which give rise to existential in human conscious for creativity development.

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